Ownership matrix	**RPP-27195**

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1.0 PURPOSE AND SCOPE

(7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.1.5, 7.1.6, 7.1.7, 7.1.8, 7.1.9, 7.1.10, 7.1.11, 7.1.12, 7.1.13, 7.1.14, 7.1.15)

Personal protective equipment (PPE) is defined as clothing, equipment, or devices worn by workers exclusively for the protection of the body such as eyes, face, head, feet, hands, and torso. PPE includes, but is not limited to, safety glasses, hard hats, footwear, and chemical protective clothing, etc.

This procedure articulates the General Hazard Analysis (GHA) and Job Hazard Analysis (JHA) process as defined in TFC-ESHQ-S_SAF-C-02. This procedure establishes and defines the process for identifying, selecting, prescribing, and maintaining PPE to protect employees, subcontractors, and visitors from injury. PPE is considered the last and final barrier of worker protection in the hierarchy of controls as defined in 10 CFR 851.22.

Appropriateness of PPE will be determined by qualified TOC staff for work in designated areas and when performing work tasks in which hazards cannot be controlled by elimination, substitution, engineering, or work practices, and administratively controlled wherever feasible and appropriate. Appropriate attire for dress in the work place is not addressed in the scope of this document but in Tank Operations Contractor (TOC) policy TFC-POL-41.

This program applies to all TOC activities where PPE may be required. The following requirement duty areas are not within the scope of this procedure (see referenced sections):

- Cold Stress (TFC-ESHQ-IH-STD-01)
- Respiratory Protection (TFC-ESHQ-IH-STD-07)
- Hanford Site Fall Protection Program (DOE-0346)
- Hearing Protection (TFC-ESHQ-IH-STD-18)
- Heat stress (TFC-ESHQ-IH-C-07)
- Hanford Site Electrical Safety Program (DOE-0359)
- Completing an Electrical Risk Assessment (TFC-ENG-FACSUP-C-38)
- Safety Signs, Tags, Barriers and Color Coding (TFC-ESHQ-S-STD-18)
- Radiological Control Manual (HNF-5183, Article 325, Appendix 3C)
- Specialized activities involving radiation and chemical contamination, or emergency activities
- Worker protective clothing and as low as reasonably achievable (ALARA) devices specific to the control of radiological hazards (e.g., Anti-C clothing, lead-lined gloves, beta face shields) are not controlled by this procedure. However, their use shall be coordinated between RadCon, Industrial Hygiene (IH), and Industrial Safety to reduce the introduction of other or competing hazards (e.g., heat stress, necessary body movements to prevent injury).

- Process for identifying hazards and documenting the controls (TFC-ESHQ-S_SAF-C-02)
- Process for communicating hazards and controls (TFC-OPS-MAINT-C-02).

2.0 IMPLEMENTATION

All sections are effective on the date shown in the header.

3.0 RESPONSIBILITIES

3.1 Managers/Supervisors

1. Control all hazards through process/material elimination, substitution, engineering, or administrative actions (in that order of hierarchy) prior to relying on the use of PPE. PPE shall be considered as the last final protective barrier only and not the first protective method deployed to protect the worker.
2. Support the GHA and JHA process as defined in TFC-ESHQ-S_SAF-C-02.
3. Initiate and facilitate all PPE approval requests on form A-6007-616, and submit completed form(s) to the PPEAC. Email each PPE request according the process described in the charter to ^WRPS PPEAC@rl.gov.
4. Ensure new and reusable PPE is maintained in clean and sanitary condition and stored in such a manner as to provide protection from deterioration, damage and accumulation of dust, dirt, and animal infestation.
5. Ensure employees who use PPE are routinely trained in
    - When PPE is necessary
    - What PPE is required to be worn
    - How to properly don, doff, adjust, and wear PPE
    - Limitations of PPE
    - Proper selection, care, use, inspection, maintenance, lifespan and disposal criteria
6. Provide employee re-training as work configurations may change and as needed in accordance with the standard: Tank Operations Contractor Skill of the Craft, TFC-OPS-MAINT-STD-03:
    - When there is a change in work function/task that renders the current training obsolete
    - When introducing new types of PPE for the hazard
    - When a new hazard is discovered, introduced or required as a result of changes to the Employee Job Task Analysis (EJTA)

- When an employee demonstrates an inability to properly use prescribed PPE.

7. Provide employees with all PPE required for work environment.

8. Remove from service, properly dispose of or repair all damaged/defective PPE.

9. Ensure that general work clothing requirements and prescribed PPE are worn as required.

   NOTE: PPE shall NOT be modified from original manufactured condition.

10. Reassess prescribed PPE for applicability:

    - If the hazards of a particular work activity change (e.g., new process/equipment introduced, change in hazardous material usage).

    - If trend analysis identifies a pattern in PPE-related accidents or exposures.

11. Stop work until an evaluation is performed if the level of PPE is found to be inadequate for site conditions.

3.2 Safety and Health Professionals

Assess the workplace according to the GHA/JHA process described in TFC-ESHQ-S_SAF-C-02 to determine if hazards are present, or are likely to be present and document said hazard(s) which, if not completely controlled in line with the hierarchy of controls priority, would necessitate the use of PPE. Consider controlling all hazards in the hierarchy of controls method.

Select PPEAC approved PPE that will protect the affected employees from the hazards identified in the hazard assessment process (TFC-ESHQ-S_SAF-C-02). A Safety Hazard Assessment, form A-6007-614, may be used to document safety specific hazards.

1. Select PPE in accordance with the requirements listed in Section 4.1 and the guidance in Attachments A, B, and C. Where PPE is necessary to address both chemical and radiological concerns (competing hazards), qualified Safety and Health and Radiological Control professionals will jointly determine requirements through the work planning process.

2. Base PPE selection on the requirements identified in Attachment A of this procedure or the appropriate duty area(s) described in Section 1.0 above.

3. Assist management with PPE approval request submittals, A-6007-616, to Initiate PPE approval requests in the PPEAC. Assist management for each PPE request according the process described in the charter to ^WRPS PPEAC@rl.gov.

4. Assist PPEAC to maintain accurate lists of both “approved PPE,” and “rejected PPE.”

5. Assist management with hazard communication sign verbiage regarding required PPE to access work areas with hazards.

6. Document and prescribe only PPEAC approved PPE for use in applicable Activity Level Work Control Documents (e.g., Work Packages, Technical Procedures, Work Permits, etc.).

7. Assist management in ensuring that PPE is properly worn.

   NOTE: It is the responsibility of the worker to wear PPE in accordance with applicable worker training as identified by management.

8. Review engineering design or facility modifications for changes in PPE, as appropriate.

3.3 Material Assets and Purchasing

1. Ensures only PPEAC approved PPE can be ordered for PPE uses.

2. Assists PPEAC maintain accurate lists of both “approved PPE” and “rejected PPE.”

3.4 Employees

1. Obtain PPE prescribed for a given work activity.

2. Inspect prescribed PPE for defects/damage that would compromise its function.

3. Return defective/damaged PPE to their manager/supervisor immediately for disposal, repair, or replacement.

4. Wear PPE in accordance with postings, training, and procedural guidelines as required for protection against identified hazards.

5. Maintain PPE in good condition.

6. Do not don any PPE you are not trained and/or qualified to wear.

3.5 PPE Approval Committee

1. Maintain PPEAC Approval Form and Form instructions.

2. Support PPE approval process described in this procedure and in accordance to TFC-CHARTER-72.

3. PPEAC Chairperson will update and maintain the “approved PPE and “rejected PPE” lists by uploading completed A-6007-616 forms into IDMS and linking to the safety website.

4.0 PROCEDURE

Figure 1 depicts the PPE process.

4.1 Working with PPE

Dress for the nature of the work assignments and the work environment including wearing, or donning, all applicable PPE identified in the GHA/JHA process. Any change in expected weather conditions, work scope, or work conditions requires evaluation.

The following minimum PPE requirements are established, with the understanding that additional PPE, if required due to any change in task, activity, work area configuration, or seasonal environmental conditions, will be identified as part of the GHA/JHA process (TFC-ESHQ-S_SAF-C-02).

For work requiring an increase in the level of PPE above the level of "skill of the craft," training or PPE required to protect adjacent workers, adjacent activities, or work in walkways where unprotected workers are unknowingly or potentially uninformed, unprotected, or in any way potentially exposed to hazards, controlling unsuspecting workers from entering the work area shall be required in accordance with TFC-EHSQ-S-STD-18.

Additional requirements may be evoked by weather conditions, such as use of safety goggles for high-wind conditions (TF-AOP-008).

1. Office/administrative work (regardless of location): Dress appropriate for the work activity and environmental conditions. Modesty clothing may only be worn in transit to/from field activities.

   NOTE 1: See TFC-POL-41 for definition of "appropriate" dress in the work place.

   NOTE 2: Review Attachment A of this document for prohibited office footwear.

   NOTE 3: Performing maintenance activities or material handling activities are not administrative activities, even when performed in office buildings. PPE appropriate for these activities shall be worn as specified in work instructions or the JHA.

   NOTE 4: If office/administrative workers are required to go into the field, the workers will be required to comply with Section 4.1.2 and/or 4.1.3 of this procedure.

2. GHA PPE: Minimum skill-based PPE are identified in skilled employees' training curriculum, experience, and knowledge. Additional PPE shall be defined by the GHA/JHA process. No GHA activities may be performed in PPE other than those identified in Attachment B.

   NOTE 1: Contact lenses may be worn but are not a substitute for eye protective devices.

   NOTE 2: Depending on job assignment and work conditions, wearing watches, rings, or other jewelry may be prohibited. Jewelry can catch and cause injuries when climbing, handling materials, or working with machinery.

NOTE 3: Health Physics Technicians exiting the farms, having doffed their protective clothing and in modesty clothing, may survey out personal items or people as they are coming off the step-off pad as part of the work flow.

NOTE 4: Operators exiting the farms, having doffed their protective clothing and in modesty clothing, may participate in dirty laundry duties as needed.

NOTE 5: If the JHA identifies PPE requirement beyond the general PPE requirements listed below, then a Work Control Boundary must be established to prevent unintentional access. The Field Work Supervisor will determine what type (e.g., barrier tape, rope, signage, or stanchion) of boundary is necessary for the duration of the work (See Attachment A, Section 1.2).

3. Work scope beyond GHA work activities: Review and follow all JHA controls prescribed by qualified health and safety professionals, including PPE requirements, on all documents (i.e., work permits, plans, etc.) associated with Activity Level Work Control Document(s) (ALWCD) which governs the work.

4. Designated work areas where cranes are operating: Follow controls identified in the GHA/JHA process. At a minimum, hard hats, protective footwear, and other PPE, such as hearing protection, may also be required as specified in work control documents. Refer to Occupational Noise Exposure and Hearing Conservation procedure, TFC-ESHQ-IH-STD-18, for high noise evaluation and control process.

5. Laboratories and laboratory complex: Dress should be appropriate for the work activity. Comply with PPE requirements that are established in the appropriate procedure, GHA/JHA process, or Chemical Hygiene Plan.

   NOTE 1: When working in a 222-S Laboratory, refer to ATS-310, Section 4.5.

   NOTE 2: All other work activities outside of laboratory work such as operations, maintenance, construction, or industrial hazards will be controlled via the GHA/JHA process.

6. Management inspections/visitor tours: Dress should be appropriate for the work activity occurring in the area being inspected or toured. The minimum field PPE, including don/doff training, shall be verified to be at the same level of the requirements for the work area and/or activity being observed or inspected (see Attachment A).

7. Winter weather conditions of snow and ice: For cold stress, refer to dress requirements identified in TFC-ESHQ-IH-STD-01. Footwear should be appropriate for the conditions. When ice/snow is predicted, recommended minimum footwear includes substantial footwear with non-slip traction sole to prevent slips and falls. Prior to work in this weather, an evaluation of footwear and supplemental traction devices should occur. Traction devices are available to employees at the supply warehouses.

8. Shop/maintenance/industrial/operating areas: Comply with PPE requirement(s) specified in the GHA/JHA process for work being performed. Follow all postings when entering hazardous or potentially hazardous work areas.

9. Work activities requiring high-visibility (Hi-Vis) PPE: Excluding "safe vehicle movement in tank farm hazardous facilities" activities which require spotters, as described in TFC-OPS-OPER-C-10, Hi-Vis outerwear (ANSI/ISEA 107-2004 conspicuity class II or class III) is required in or outside of tank farms or facilities when the following conditions exist:

   - When employees are exposed to approaching vehicles or moving equipment traffic while performing tasks that divert attention away from the approaching vehicles or moving equipment (day or night).

   - When employees are performing tasks in areas lacking illumination levels identified in TFC-ESHQ-IH-STD-13, Table 1, "Minimum Illumination Intensities in Foot-Candles."

   NOTE 1: Hi-Vis outerwear is not required for pedestrian foot traffic in approved designated pedestrian conveyance ways (e.g., painted pedestrian marked areas in parking lot, sidewalks, approved foot traffic areas, etc.)

   NOTE 2: When evaluating PPE requirements and the need for higher level protection or if PPE could cause an increased risk, the PPE with a high level of protection or decreased risk shall be assigned (e.g., electrical work).

   NOTE: The selected PPE is documented in accordance with the processes described in TFC-ESHQ-S_SAF-C-02.

Safety and Health Professional

1. Select PPE in accordance with the requirements listed in Section 4.1 and the guidance contained in Attachments A and B.

Managers/ Supervisors

2. Provide training to each employee who is required to use PPE.

   a. Provide employee re-training:

      - When there is a change in work function/task that renders the initial training obsolete

      - When introducing new types of PPE

      - When employee proficiency appears to be diminishing.

   b. Ensure workers are using PPE properly and that individuals comply with work PPE requirements for the work area.

   c. Correct behaviors and coach individuals relative to inappropriate use or failure to wear correct PPE.

Employee

3. Demonstrate an understanding of the training and the ability to use PPE properly before attempting to perform work requiring the use of PPE.

4. Receive/obtain PPE prescribed for a given work activity.

5. Wear prescribed PPE on the job in accordance with the work area posting, JHA, work instruction, or procedure requirements, pre-job briefing, and management expectations.

6. When noticed in the field, bring a co-worker's PPE deficiencies to their attention and inform your supervisor.

    a. Stop work if it involves an immediate danger.

4.2 Purchasing PPE

PPE shall be approved by the PPEAC prior to use.

Procurement of PPE is described in Business Services procedures, TFC-BSM-CP_CPR-C-01 and/or TFC-BSM-CP_CPR-C-06, justified by following the Determination of Required Approvals (DRA) process:

1. Identifying PPE exists on the PPEAC "Approved" list. If PPE is not on the "Approved" list, follow the PPE Approval Request process as described in, A-6007-616 form instructions, TFC-CHARTER-72 or described in Section 3.0 of this procedure.

2. Complete a new PPE Approval Request via email to ^WRPS PPE Approval Committee containing required information specified in TFC-CHARTER-72.

5.0 DEFINITIONS
(7.1.14)

Athletic shoes. These are shoes which do not meet the definition of substantial footwear, protective footwear nor prohibited footwear. Athletic shoes are designed to be used for a specific sport or purpose (e.g., running shoes, walking shoes).

Designated pedestrian walkways. Paths without tripping/falling down hazards and are established by design for routine worker pedestrian traffic. Established, well maintained and routinely groomed and inspected parking lots, contain designated pedestrian walkways.

Determination of Required Approvals (DRA). Refer to the DRA definition in the appropriate controlling Business Services procedure and/or Material Request website.

General footwear. Footwear which does not meet the definition of substantial footwear, protective footwear nor prohibited footwear. General footwear is not intended to meet standards as incorporated by reference in OSHA (i.e., American National Standards Institute [ANSI], ASTM, etc.); however, general footwear has a fully enclosed toe and heel.

GHA PPE. Specific Activity/Task/Hazard Based Industrial Work Ensemble as determined by GHA Activity/Task/Hazard (see GHA). Furthermore, GHA designated PPE (e.g., hard hats, hearing protection) will be worn as determined by GHA Activity/Task/Hazard.

Hazardous conditions. Work environments or motion capable of causing impact, injury, or entanglement, high temperatures, chemicals, light radiation, falling or rolling/pinching objects, sharp objects, flying particles/dust, electrical hazards, and co-located work activity.

High visibility (Hi-Vis) outerwear. Shirts, jackets, or vests that have highly reflective properties and a color that is easily discernible from any background as defined in referenced ANSI/ISEA 107 (see Section 7.2).

Long-sleeved shirt. Shirt in which both sleeves reach the wrist.

Modesty clothing. Refer to the Heat Stress Control procedure, TFC-ESHQ-IH-C-07, for definition of Modesty Clothing.

Non-hazardous or low hazardous work environment. A work area or environment which does not require a GHA/JHA hazard review or work permits hazard control sets as defined in TFC-ESHQ-S_SAF-C-02.

Personal protective equipment. Equipment and clothing beyond minimum dress requirements worn to minimize exposure to protect the eyes, face, head, foot, and hand from injury or illness associated with exposure to absorption or physical contact hazards commonly associated with work activities and the work environment. Types of PPE are defined in Attachment A. Levels of PPE are defined in Attachment B.

Prohibited Footwear. Footwear identified as the following:

- Bare feet
- Beach type footwear (e.g., Crocs™, flip-flops)
- Moccasins, slippers, and other soft-soled shoes, toe-shoes/five finger/barefoot style shoes.

Protective footwear. Footwear designed, constructed, tested, safety-rated, or otherwise designated by management to protect the wearer from specific hazard(s) (e.g., chemical compatibility rated, or conforming to the specifications identified in 29 CFR 1910.132, ANSI Z41.1, ASTM F-2413, etc.).

Sleeved shirt. Shirts in which, as a minimum, are sleeved over the ball of the shoulder of the wearer.

Substantial footwear. Shoe or boot with an upper made entirely of firm leather, or non-absorbing, firm man-made leather (e.g., Cordura® nylon, Nubuck® leather, etc.), non-wicking uppers, or equally firm material and sturdy construction that fully encloses the foot and has semi-rigid, non-slip, substantial sole (e.g., Vibram®, LOWA®, Winter Trac®, etc.), with defined heel or gripping sole pattern. Athletic "looking" shoes, "tennis shoes," or shoes which may to some degree be thought of as athletic shoes may be considered substantial footwear IF the shoe meets the definition of substantial footwear.

Substantial footwear with over-the-ankle laces and/or zip-ups. Shoes/boots that provide ankle support keeping the ankle from unnatural positions while walking on an uneven surface.

Uneven walking/working surface(s). Areas workers are encouraged to avoid if possible due to significant potential of tripping and/or falling down (e.g., inside farm tripping hazards, undesigned or undesignated pedestrian walkways, sloping surfaces). Substantial footwear, with over-the-ankle protection, is required when assigned work is in areas with uneven walking/working surface(s).

6.0 RECORDS

The following record is generated during the performance of this procedure:

- PPE Approval Request (A-6007-616).

The record custodian identified in the Company Level Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.

7.0 SOURCES

7.1 Requirements

7.1.1 10 CFR 851, "Worker Safety and Health Program."

7.1.2 29 CFR 1910, Subpart I, "Personal Protective Equipment," 1910.6, "Incorporation by Reference."

7.1.3 29 CFR 1910, Subpart A, "Personal Protective Equipment," 1910.132, "General requirements."

7.1.4 29 CFR 1910, Subpart I, "Personal Protective Equipment," 1910.133, "Eye and face protection."

7.1.5 29 CFR 1910, Subpart I, "Personal Protective Equipment," 1910.135, "Head protection."

7.1.6 29 CFR 1910, Subpart I, "Personal Protective Equipment," 1910.136, "Foot protection."

7.1.7 29 CFR 1910, Subpart I, "Personal Protective Equipment," 1910.138, "Hand protection."

7.1.8 29 CFR 1926, "Safety and Health Regulations for Construction," 1926.6, "Incorporation by Reference."

7.1.9 29 CFR 1926, "Safety and Health Regulations for Construction," 1926.28, "Personal protective equipment."

7.1.10 29 CFR 1926, "Safety and Health Regulations for Construction," 1926.95, "Criteria for personal protective equipment."

7.1.11 29 CFR 1926, "Safety and Health Regulations for Construction," 1926.96, "Occupational foot protection."

7.1.12 29 CFR 1926, "Safety and Health Regulations for Construction," 1926.100, "Head protection."

7.1.13 29 CFR 1926, "Safety and Health Regulations for Construction," 1926.102, "Eye and face protection."

7.1.14 29 CFR 1926, "Safety and Health Regulations for Construction," 1926.107, "Definitions applicable to this subpart."

7.1.15 TFC-PLN-05, “Conduct of Operations Implementation Plan.”

7.2 References

7.2.1 ANSI Z35.1-2, “Accident Prevention Signs.”

7.2.2 ANSI Z41, “American National Standard for Personal Protection—Protective Footwear.”

7.2.3 ANSI/ISEA Z87.1-2010, “Occupational and Educational Eye and Face Protection Devices.”

7.2.4 ANSI/ISEA Z89.1-2009, “American National Standard for Industrial Head Protection.”

7.2.5 ANSI/ISEA 105-2016, “American National Standard for Hand Protection Classification.”

7.2.6 ANSI/ISEA 107-2004, “American National Standard for High-Visibility Safety Apparel.”

7.2.7 ASTM F739, “Test Method for Resistance of Protective Clothing Materials to Permeation by Liquids or Gasses under Conditions of Continuous Contact.”

7.2.8 ASTM F2413-05, “Standard Specification for Performance Requirements for Foot Protection.”

7.2.9 DOE-0346, “Hanford Site Fall Protection Program (HSFPP).”

7.2.10 DOE-0359, “Hanford Site Electrical Safety Program (HSESP).”

7.2.11 Forsberg, K. and Mansdorf, S.Z., “Quick Selection Guide to Chemical Protective Clothing,” Fifth edition, Wiley, 2007.

7.2.12 HNF 5183, Article 325, Appendix 3C, “Radiological Control Manual.”

7.2.13 RPP-34147, “Tank Waste Dermal Exposure Assessment.”

7.2.14 TF-AOP-008, “Response to High Winds and Dust Storms.”

7.2.15 TFC-BSM-CP_CPR-C-01, “Purchasing Card (P-Card).”

7.2.16 TFC-BSM-CP_CPR-C-06, “Procurement of Materials.”

7.2.17 TFC-BSM-IRM_DC-C-02, “Records Management.”

7.2.18 TFC-CHARTER-72, “Personal Protective Equipment Approval Committee Charter.”

7.2.19 TFC-ENG-FACSUP-C-38, “Completing An Electrical Risk Assessment (ERA) or Energized Electrical Work Permit (EEWP).”

7.2.20 TFC-ESHQ-IH-C-02, “Hazard Communication.”

7.2.21 TFC-ESHQ-IH-C-07, “Heat Stress Control.”

7.2.22 TFC-ESHQ-IH-C-17, “Employee Job Task Analysis.”

7.2.23 TFC-ESHQ-IH-STD-01, “Cold Stress.”

7.2.24 TFC-ESHQ-IH-STD-07, “Respiratory Protection.”

7.2.25 TFC-ESHQ-IH-STD-13, “Illumination.”

7.2.26 TFC-ESHQ-IH-STD-18, “Noise Identification and Hearing Conservation Program.”

7.2.27 TFC-ESHQ-S_SAF-C-02, “Job Hazard Analysis.”

7.2.28 TFC-ESHQ-S-STD-18, “Safety Signs, Tags, Barriers, and Color Coding.”

7.2.29 TFC-OPS-MAINT-C-01, “Tank Operations Contractor Work Control.”

7.2.30 TFC-OPS-MAINT-C-02, “Pre-Job Briefings and Post-Job Reviews.”

7.2.31 TFC-OPS-MAINT-STD-03 “Tank Operations Contractor Skill of the Craft.”

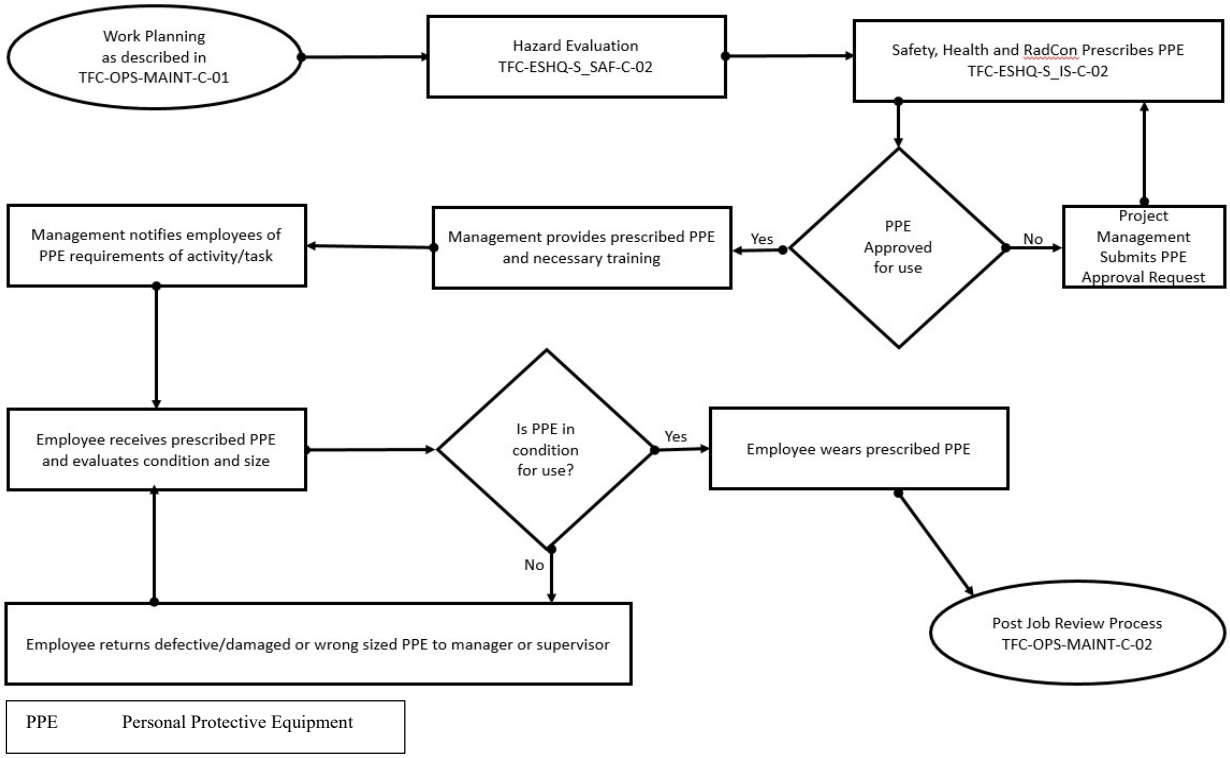
7.2.32 TFC-OPS-OPER-C-10, “Vehicle and Dome Load Control in Tank Farm Facilities.”

7.2.33 TFC-OPS-OPER-C-13, “Technical Procedure Control and Use.”

7.2.34 TFC-PLN-34, “Industrial Hygiene Exposure Assessment Strategy.”

7.2.35 TFC-POL-41, “Appropriate Attire for the Work Place.”

Figure 1. PPE Process.



ATTACHMENT A – PPE SELECTION CRITERIA AND GUIDANCE

1.0 GENERAL

1.1 Hazardous Condition Assessment

Hazard conditions requiring PPE shall be evaluated by qualified safety and health professionals and documented via the GHA/JHA process. This information will serve as general guidance regarding the hazard(s) evaluated and corresponding hazard control set communicated to each worker via training and/or the work planning and control process. The qualified health and safety professional, in consultation with the PPEAC, will make final decisions as to the appropriateness of PPE for a given situation.

1.2 Work Control Boundary

Work Control Boundary access requirements to hazardous areas shall be posted as below to indicate PPE requirements within the boundary beyond those required immediately outside the boundary. Refer to TFC-ESHQ-S-STD-18 for work hazard communication signage and boundary control requirements.

2.0 EYE/FACE PROTECTION

2.1 Hazardous Condition

Protection is required where there is a potential for injury from flying particles, molten metal, liquid chemicals, acid or caustic liquids, chemical gases or vapors, potentially injurious light radiation, or a combination of these.

For performance of chipping or grinding, face shields are to be worn.

NOTE: With the exception of task-specific PPE requirements, or collocated work creating eye hazards, the following areas and activities are excluded from safety glass requirements:

- Administrative buildings and office trailers
- Parking areas and transitioning between administrative areas
- Change trailers
- Control room areas (e.g., 242-A Evaporator, ETF)
- Monitoring areas where the primary activity is to observe screens or displays (e.g., HMIs, etc.)
- Designated areas within non-administrative facilities that have been evaluated and posted to identify no safety glasses required
- When conducting MOPs in areas not requiring eye protection and no eye hazards exist.

2.2 Selection/Use Criteria

Protection will conform to specifications of ANSI Standard Z87.1, “Practice for Occupational and Educational Eye and Face Protection.”

All safety glasses must have side protection that provides side impact resistance. Side protection may be an integral part of the frame or lens, or a separate side shield.

ATTACHMENT A – PPE SELECTION CRITERIA AND GUIDANCE (cont.)

NOTE: No. 2 gray lenses are considered "sunglasses" and are not intended for indoor usage.

Sunglasses should not be worn indoors. Tinted lens safety glasses are authorized only as follows: No. 1 or 2 rose for indoor use (where additional glare protection is needed); No. 2 gray for outdoor use (where filtering of bright light (e.g., sunlight) is needed).

NOTE: The rate at which it takes a tint change to occur in transition lenses is not instantaneous (e.g., it may take a minute for the fading process to occur) and may present a hazard to workers moving from outdoor light to areas of lower illumination (e.g., indoors).

Transition lenses may be authorized, but only for employees who do not operate equipment between indoor and outdoor locations, or who are not otherwise involved in activities requiring critical acuity (fast reaction to visual stimuli).

2.3 Prescription Safety Eyewear (Safety Glasses) Program

Ordinary prescription eyewear does not provide adequate protection from injury to the eyes from impact hazards and does not meet ANSI Z87.1 eye protection specifications. Therefore, it is the policy to provide protective prescription eyewear to qualified active employees who need corrective lenses for vision and whose job routinely requires the use of safety eyewear for protection.

An ultraviolet (UV) coating may be requested when ordering prescription safety eyewear with glass lenses. To ensure worker protection, an employee may be issued non-prescription eyewear for use over the top of their regular street-wear prescription glasses until prescription safety glasses are ordered and received.

Employees are eligible for one pair of prescription safety glasses every 24 months (on an as-needed basis) while under Washington River Protection Solutions, LLC (WRPS) employment. Purchase of safety glasses for construction, services, or task based subcontractors is the responsibility of that subcontractor. Subcontractors are required to comply with the same WRPS requirements for use of protective equipment.

Prescription safety glasses can be obtained through the existing P-Card procurement process noted in TFC-BSM-CP_CPR-C-01.

NOTE: The terminology "on an as-needed basis" implies that the eyewear shows sufficient signs of normal wear-and-tear, or the result of an optical examination evidences a vision change necessitating a revised prescription.

Exception 1: Additional replacement or repair costs during a 24-month period will be covered by WRPS (with manager approval) for prescription safety glasses that have been damaged as a result of a task-related incident occurring during the course of job performance.

Exception 2: Additional replacement costs during a 24-month period will be covered by WRPS (with manager approval) when the result of an optical examination reveals a change in vision necessitating a change in corrective lens.

ATTACHMENT A – PPE SELECTION CRITERIA AND GUIDANCE (cont.)

Full-face respirators present a unique situation for employees who need prescription glasses. The use of special glasses and mounts inside the face piece of the respirator may be necessary to provide/maintain an adequate seal. When an employee's prescription eyewear will not fit into a full-face respirator with the appropriate mounts, the ordering of custom prescription optical inserts that are compatible with the respirator will be processed as directed in the Purchasing Card (P-Card) procedure TFC-BSM-CP_CPR-C-01. When an employee must wear optical inserts as part of the face piece, the face piece and lenses shall be fitted by qualified individuals to provide good vision, comfort, and a gas-tight seal.

3.0 HEAD PROTECTION

3.1 Hazardous Condition

Protection is required where there is a potential danger of head injury due to the hazards of falling or flying objects, electrical shock, or burns.

3.2 Selection/Use Criteria

- Shall conform to the specifications of ANSI Z89.1 and be non-conductive
- Shall be worn only as designed and tested (e.g., do not wear backwards unless imprinted by the manufacturer indicating that it can be worn in this manner)
- Hard hats shall be worn in a manner that prevents objects from being placed between the top of the hard hat suspension and the inner shell of the hard hat. It is an acceptable practice to wear garments or similar articles on the head so long as they do not intrude into the open space between the hat's suspension and the shell of the hat. Acceptable head wear items include items such as fleece liners, zero hoods, kerchief, bandannas, respirator face pieces, welder's caps, and similar close form fitting articles. (Baseball caps are NOT allowed to be worn inside a hardhat because the impact of a falling object could force the "button" to cause serious injury.)
- Shall not be painted
- Hard hats shall be replaced according to manufacturer recommendations/instructions or as user checks reveal:
  - Cracks, nicks, or abrasions appear in the shell surface
  - Shiny surface appears dull or chalky
  - Shell becomes brittle
  - Cracking, fraying, or tearing in the suspension
  - The hard hat has fallen from an elevation
  - If the wearer is involved in an impact accident.

ATTACHMENT A – PPE SELECTION CRITERIA AND GUIDANCE (cont.)

NOTE: Service life is determined by the work environment, chemical exposure, sunlight, and its care during use. Follow manufacturer recommendations/instructions for each model. Proper storage before use in the warehouse and infrequent use by office personnel may extend the service life. Unless manufacturers provide specific recommendations regarding usable life span of each hard hat, replace hard hats at five years of use, and the suspension every year. Proper checks before use may extend the service life beyond the five- and one-year periods. It is acceptable for a hard hat that has been inspected before use to be used beyond the five-year period if the manufacturer allows it and none of the items listed above are observed. Refer to the manufacture date molded inside hard hat to determine date of manufacture and possible expiration date.

4.0 HAND PROTECTION

4.1 Hazardous Condition

Hand protection is required where there is a potential for hand injury due to exposure to such hazards as:

- Skin absorption of harmful substances
- Cuts, lacerations, abrasions, and punctures
- Chemical burns, thermal burns
- Harmful temperature extremes.

Removing rings and watches is strongly encouraged. Jewelry can catch and cause injuries when climbing, handling materials, or working with machinery.

4.2 Selection Criteria

Hand protection is selected based on published product performance characteristics, degree of dexterity required to perform the work/task, and the appropriate application for protection against the hazard(s) identified.

- Ensure chemical protective gloves are available and used by employees when the product presents hazards to the upper extremities.

- Ensure cut- and/or puncture-resistant gloves are available and used by employees whenever abrasion, laceration, or puncture hazards are associated with the task.

- Consider thermal temperature extremes and hot and cold environments along with the appropriate sizing when selecting hand protection.

A “Work Glove Matrix” poster is available at safety glove issuance locations and on the Industrial Safety website.

ATTACHMENT A – PPE SELECTION CRITERIA AND GUIDANCE (cont.)

5.0 FOOT PROTECTION

5.1 Office/Administrative Footwear

Employees working solely in office or administration settings are permitted to wear shoes/sandals with open toes and strapped heels. This type of footwear may also be worn while transitioning between administrative buildings, mobile offices, and their parking areas on designated approved pedestrian walk ways (i.e., flat surfaces, designed stairs, sidewalks).

If the job duties or location require entry into any hazardous or potentially hazardous work environment other than office or administrative work areas, footwear appropriate to the job and work task will be worn by the worker. Office/administrative workers may wear general and substantial footwear as appropriate.

5.2 General Footwear

5.2.1 Non-Hazardous or Low Hazardous Work Environments

NOTE: See TFC-POL-41 for definition of "appropriate" dress in the work place.

All work activities must be evaluated for hazards (TFC-ESHQ-S_SAF-C-02), and if hazards are identified, controls are required. For work environments with no specific foot hazards (e.g., office/administrative/some laboratory/janitorial activities and tasks) nor any GHA/JHA evaluated and determined control set for foot protection, general footwear may be acceptable. General footwear includes a fully enclosed toe and heel mechanism. In all cases, footwear should be appropriate to the job and work tasks to be performed.

5.2.2 Selection Criteria

General footwear has a fully enclosed toe and heel and is selected with an appreciation for the nature and environment of the work activity.

If the job duties or location require entry at any time into other work areas, footwear appropriate to the job and evaluated for the work task will be worn by the worker. Refer to sections 5.3 and 5.4.

- Athletic shoes are considered appropriate general footwear for casual office, exclusively administrative environments and non-hazardous environments, use the GHA/JHA process for all hazards evaluation (TFC-ESHQ-S_SAF-C-02).

ATTACHMENT A – PPE SELECTION CRITERIA AND GUIDANCE (cont.)

5.3 Substantial Footwear

5.3.1 Hazardous Condition (Worksite)

Shop/maintenance/operating area, tasks, and activities other non-office/administrative work area, tasks and activities present hazards not found performing administrative type functions nor inside the office environment. Footwear should be appropriate to the job and work tasks to be performed. Performing work with or near hazards requires evaluation by qualified health and safety professionals in the GHA/JHA process (TFC-ESHQ-S_SAF-C-02). As a result of the hazard evaluation process, substantial footwear may be required as minimum protection when the hazard does not require *protective* footwear identified as ASTM F2413-05 (see the next, section 5.4 for information regarding protective footwear).

Footwear shall have non-slip soles and traction patterns for exposure to snow and ice conditions.

5.3.2 Selection Criteria

Substantial footwear is required as a minimum footwear for field work tasks due to the prevalence of industrial work areas with walking/working surfaces and the gravel terrain in and around the tank farms.

Substantial footwear is a shoe or boot that:

- Is made with leather or other material of sturdy construction
- Fully encloses the foot
- Has a semi-rigid, non-slip sole pattern
- Has a well-defined traction pattern.

Over-the-ankle footwear is required while performing tasks off paved or concrete surfaces (i.e., uneven walking/working surfaces are prevalent in and around the tank farms).

Athletic shoes are not considered substantial footwear. See definitions, Section of athletic shoe and substantial shoe.

A qualified WRPS Health and Safety professional will evaluate the work and associated tasks and document this evaluation in the GHA/JHA process (TFC-ESHQ-S_SAF-C-02).

The cost for purchase of substantial footwear will be borne by the employee.

ATTACHMENT A – PPE SELECTION CRITERIA AND GUIDANCE (cont.)

5.4 Protective Footwear

5.4.1 Hazardous Condition (Task Defined)

The worker shall wear protective footwear when working in areas where there is a danger of chemical exposure or foot injuries due to falling or rolling objects, objects piercing the sole, or when the use of protective footwear will protect the employee from an electrical hazard (e.g., static-discharge or electric-shock hazard) that remains after the employer takes other necessary protective measures. Examples include: carrying or handling materials such as heavy packages, SCBA tanks, objects, parts or heavy tools that could be dropped. These aspects will be considered when qualified Health and Safety professionals evaluate the work task/activities via the GHA/JHA process to determine whether protective footwear is required.

5.4.2 Selection Criteria

NOTE: On March 1, 2005, ANSI Z41 was withdrawn and replaced by then new American Society of Testing Material (ASTM) International Standards. New rated footwear will contain the ASTM identification labeling. Older rated footwear may still have the ANSI Z41 PT99 labeling. Either is acceptable.

Protective footwear (e.g., safety boots with metal or composite toes) shall conform to the specifications of ASTM F2413-05, "Standard Specification for Performance Requirements for Foot Protection (formerly American National Standards Institute (ANSI) Standard Z41, "American National Standard for Personal Protection-Protective Footwear" for its performance criteria).

All safety protective footwear shall be shoes or boots composed of leather or other material of sturdy construction with over the ankle protection, meeting, at a minimum, impact and compression resistance as noted below and any of the other categories of protection as defined by the employee job description or job hazard analysis. Athletic type protective shoes are prohibited.

- **Impact- and compression-resistant**, which uses a steel or nonmetallic toe cap to protect against falling objects or crushing from heavy rolling objects. (NOTE: A non-metallic toe cap of molded polymer or fiberglass composite will not activate metal detectors). The level of impact and compression protection correlating to 75 foot-pounds of force (Class 75 rating) is required. (I = Impact; C = Compression).

- **Metatarsal**, which provides similar protection against falling objects to the area of the foot between the ankle and the toes. (MT = Metatarsal).

- **Puncture-resistant**, where the mid-sole, usually comprised of steel, resists penetration from sharp objects such as nails or broken glass. (PR = Puncture Resistant).

- **Electrical hazard**, where the non-conductive sole and heel of the shoe or boot is designed to protect workers from electric shock from 600 volts AC or less under dry conditions. (EH = Electrical Hazard).

ATTACHMENT A – PPE SELECTION CRITERIA AND GUIDANCE (cont.)

The following are examples of ANSI code inscriptions on a piece of protective footwear. The protective identification ANSI code will be legible (imprinted, stamped, stitched, etc.) on at least one shoe of each pair:

- ASTM F2413-05 or ANSI Z41 PT 99
- FI/75 C/75 MT/75
- Cd 1 EH
- PR.

Line 1: ASTM F2413-05 or ANSI Z41 PT99. This line identifies the ASTM F2413-05 international standard or ANSI Z41 standard. The 05 indicates the year of the ASTM standard; the letters PT indicate the protective section of the ANSI standard. This is followed by the last two digits of the year of the standard in which the footwear meets compliance (e.g., 1999).

Line 2: FI/75 C/75 MT/75. This line identifies the applicable gender (M or F; here it is F) for which the footwear is intended. It also identifies the existence of impact resistance (I), the impact resistance rating (75 foot-pounds). This line can also include a metatarsal protection designation (MT) and rating (75 foot-pounds).

Lines 3 & 4: Cd 1 EH; PR. These lines designate conductive properties (Cd) and Work type (1 or 2), electrical hazard (EH), and puncture resistance (PR), if applicable.

Protective footwear can be obtained as directed in the Purchasing Card (P-Card) procedure TFC-BSM-CP_CPR-C-01. The manager approving the purchase is responsible for determining that the end user requires the protective footwear being requested for performance of task assignments; ensures that the appropriate blocks are checked on the site form; and verifies that the transaction made by the employee is in compliance with WRPS policy.

Employees under WRPS employment are eligible for a new pair of ASTM/ANSI-approved protective footwear initially, and every twelve months thereafter. This twelve-month protective footwear replacement frequency may be applied only where the shoe or boot shows sufficient signs of wear and tear to necessitate replacement.

Purchase of protective footwear for construction, services, or task-based subcontractors is the responsibility of that subcontractor. Subcontractors are required to comply with the same WRPS requirements for use of protective equipment, including footwear.

6.0 CHEMICAL PROTECTION

6.1 Hazardous Condition

Where hazardous material constitutes a hazard, contact or otherwise, from a chemical (e.g., ammonia, sodium hydroxide, particulate, lead, beryllium, dimethylmercury).

ATTACHMENT A – PPE SELECTION CRITERIA AND GUIDANCE (cont.)

6.1.2 Selection Criteria

Ensure and select barrier material that is not subject to degradation by the chemical constituents or chemical form (solid, liquid, or vapor) and that prevents chemical contact with the worker. The selection process should employ the efforts and individual PPE approvals of the TOC PPE Approval Committee.

PPE donning and doffing techniques shall be considered and employed as to minimize the potential for uncontrolled chemical contamination.

Chemical permeability barriers that are selected for PPE shall be selected based upon the chemical and multi-constituent chemical products as identified in TFC-PLN-34, and shall also be evaluated for heat stress conditions per TFC-ESHQ-IH-C-07.

6.2 Tank Waste and Tank Condensate

6.2.1 Hazardous Condition

Some of the chemicals in tank waste and/or tank condensate can damage the skin (i.e., corrosive), irritate the skin (i.e., dermatitis), or be absorbed through the skin. Industrial Hygiene shall be consulted per TFC-ESHQ-S_SAF-C-02 to document the evaluation of all work scope when the potential of exposure to tank waste and tank condensate exists. Engineering controls and work practices shall be used to minimize all potential exposures with tank waste (highly corrosive) and condensate. PPE is the last barrier to minimize the potential for skin contact and worker exposures. Tank wastes having high potential skin absorption hazards are also high in radionuclides. Controls for radiological and contamination protection (time, distance, shielding, PPE permeability) also limit potential for skin contact and absorption but may add competing hazard issues (e.g., heat stress, visual acuity, dexterity). Review and discuss with the project industrial hygienist the exposure assessment plan, TFC-PLN-34, for detailed hazard evaluation and control information.

6.2.2 Selection Criteria

Since engineering controls may not eliminate all possible exposures, attention is often placed on reducing the potential for direct skin contact through the use of protective clothing that resists permeation, penetration, and degradation. The industrial hygiene subject matter expert evaluates not only the constituents of the hazardous chemical or product, but also evaluates the effects of the environmental factors such as temperature and chemical properties on PPE chemical permeation rates. Standard test methods approved by IH, such as ASTM F 739, “Permeation of Liquids and Gases through Protective Clothing Materials under Conditions of Continuous Contact,” should be used when evaluating PPE for chemical protection. Refer to the hazard analysis and exposure assessment process based on work scope as identified in TFC-ESHQ-S_SAF-C-02 and TFC-PLN-34. All PPE shall be considered for competing hazards.

ATTACHMENT A – PPE SELECTION CRITERIA AND GUIDANCE (cont.)

7.0 Approved Use of Orange and Red Coveralls

Table A-1. Conditions for Red and Orange Coveralls in Rad Areas.

Hazard	PPE	Note
Hot Work: Welding/Cutting/Grinding	Red coveralls	Orange coveralls **shall not** be worn for hot work.
Work within an arc flash boundary	Orange coveralls	Red coveralls **shall not** be worn for electrical or work within an arc flash boundary.

ATTACHMENT B – LEVELS OF PPE

1.0 GHA PPE

Minimum required GHA designated PPE and protective clothing requirements (see GHA). Any adjustments to this minimum PPE ensemble shall be determined by qualified health and safety professional via the GHA/JHA hazard analysis process and documented in associated worker training curricula.

2.0 JHA LEVEL PERSONAL PROTECTIVE EQUIPMENT

Minimum required PPE shall be determined by qualified health and safety professionals via the GHA/JHA process and documented for prescribed use on each work team approved permit for work and/or associated ALWCD. See controls specified in TFC-ESHQ-S_SAF-C-02.

3.0 LEVEL D PERSONAL PROTECTIVE EQUIPMENT

Level D PPE is the minimum basic level of personal protection equipment used in the tank farms or areas or operations where no air contaminants are present that would require respiratory protection. While enroute from one work location to another, modesty clothing is acceptable as the minimum dress. Workers exiting a contaminated area may remove protective clothing at the step-off pad and proceed to the change trailer in modesty clothes. No work may be performed while wearing only modesty clothing (shorts) unless otherwise specified (see note 3-4 in section 4.1 above). Specific PPE requirements will be determined by hazards associated with the work activity and may be used as appropriate:

- Coveralls and/or street clothes—covering the legs and sleeved over the ball of the shoulders
- Anti-contamination clothing (as required by Health Physics if radiological hazards exist)
- Safety glasses or goggles
- Substantial footwear or protective footwear as defined by location, activity, or JHA
- Hard hat
- Hearing protection
- Gloves.

4.0 LEVEL C PERSONAL PROTECTIVE EQUIPMENT

Level C PPE is required where airborne contaminant levels are known or characterized, and a potentially hazardous atmosphere exists. Use of Level C PPE is not permitted in oxygen-deficient atmospheres (less than 19.5 percent oxygen), for contaminants with poor warning properties (odor detection level is greater than the threshold limit value), or when contaminant concentrations exceed the respirator limits. Atmospheric contaminants will not adversely affect the skin or be absorbed through exposed skin.

Personnel working inside the tank farms and wearing Level C PPE may wear the following as appropriate:

ATTACHMENT B – LEVELS OF PPE (cont.)

- Full-face, air-purifying respirator (with appropriate filters and/or canisters and appropriate prescription eye wear without temple bars)
- Disposable chemical-resistant coveralls
- Anti-contamination clothing (as required by Health Physics if radiological hazards exist)
- Protective footwear (as applicable from hazard evacuation)
- Chemical-resistant shoe covers
- Hard hat
- Inner chemical-resistant gloves (impervious to chemical agent of interest)
- Outer chemical-resistant gloves (impervious to chemical agent of interest)
- Hearing protection.

5.0 LEVEL B PERSONAL PROTECTIVE EQUIPMENT

Level B PPE is required when airborne contaminant levels are unknown and a potentially hazardous atmosphere exists. Level B PPE may be used only when it is unlikely that workers will be exposed to high concentrations of contaminants or chemical splashes that will affect the skin or be absorbed by it. Level B is generally the same as Level C, except the respiratory protection is upgraded to air-supplied respirator or self-contained breathing apparatus (SCBA).

Personnel working inside the tank farms with designated Level B PPE may wear the following as appropriate:

- Air-supplied respirator or SCBA
- Disposable chemical-resistant coveralls
- Protective footwear
- Chemical-resistant shoe covers
- Hard hat
- Inner chemical-resistant gloves (impervious to chemical agent of interest)
- Outer chemical-resistant gloves (impervious to chemical agent of interest)
- Hearing protection.

6.0 LEVEL A PERSONAL PROTECTIVE EQUIPMENT

Level A PPE is required where atmospheric conditions are immediately dangerous to life and health (IDLH). In rare circumstances, it may be necessary for personnel in the tank farms to wear Level A PPE. Level A PPE has the same maximum respiratory protection as Level B; however, the highest available skin and eye protection. Personnel working inside the tank farms with designated Level A PPE may wear the following as appropriate:

- Air-supplied respirator or SCBA
- Fully encapsulating, chemical-resistant suit (suit material must be compatible with substances involved)
- Coveralls
- Protective footwear
- Chemical-resistant shoe covers
- Hard hat
- Inner chemical-resistant gloves
- Hearing protection.

ATTACHMENT C – PPE SIGNS IN HAZARDOUS WORK LOCATIONS

PPE safety signs in work areas will be consistent with ANSI standards and should be consistent throughout the work areas. ANSI Z585.2 standard determines the hazard level listed on the sign (warning/caution). Follow the work area barricade and signage process as described in the Safety Signs, Tags, Barricades, and Color Coding procedure TFC-ESHQ-S-STD-18.

Area safety representatives will be directly involved with their work area postings to ensure that the correct ANSI standard signs and language are provided for the hazards present.

Below are examples of the correct signs: